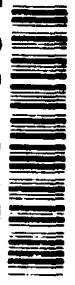


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Executive Research Project
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The Critical Impact of Strategic Mobility on National Security

Colonel
David C. Rauhecker
U. S. Air Force

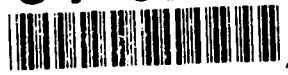
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ABSTRACT

As we approach the 21st century, many extraordinary developments are redefining a "New World Order." What was once a bi-polar power system is now evolving into a multi-polar arrangement, complete with the dispersement of very sophisticated military capabilities. In this evolving environment, "Deterrence," will remain as the cornerstone of U.S National Security Strategy. In support of this strategy, the United States will become even more dependent on its ability to project power to every region of the world to confront any challenges to its vital interests.

To rapidly deploy and sustain combat forces worldwide, the United States relies on a "mobility triad." This is the balanced and complimentary capabilities of Airlift, Sealift, and Prepositioning. The focus of this research paper is to investigate the strategic mobility triad of the United States to determine if it is capable of projecting and sustaining a balanced military force on a global scale in support of U.S. national security objectives.

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The Critical Impact of Strategic Mobility on National Security

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U. S. Air Force

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Lieutenant Colonel Richard Mullery, USAF



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"In a tale of war, the reader's mind is filled with the fighting. The battle -- with its vivid scenes, its moving incidents, its plain and tremendous results -- excites imagination and commands attention. The eye is fixed on the fighting brigades as they move amid the smoke, on the swarming figures of the enemy, on the General, serene and determined, mounted in the middle of his Staff. The long trailing line of communications is unnoticed. The fierce glory that plays on red, triumphant bayonets dazzles the observer, nor does he care to look behind to where along a thousand miles of rail, road, and river the convoys are crawling to the front in uninterrupted succession. Victory is the beautiful, bright coloured flower. Transport is the stem without which it could never have blossomed."

-- Winston Churchill

The River War, 1899

FOREWORD

This research paper is being written during one of the most tumultuous periods in modern world history. Extraordinary developments including: the collapse of the Soviet Union, democratization of Eastern Europe, reunification of East and West Germany, proposed reunification of North and South Korea and a peace accord in Central America -- are creating a significantly different world environment as we approach the 21st century. All of these changes are evolving into what is popularly referred to as the "New World Order."

In this New World Order, the National Security Strategy of the United States will take on new dimensions in deterrence. The probability of global war with the Soviet Union is diminishing considerably. What was once a bi-polar power system is now developing into a multi-polar arrangement, complete with the dispersement of very sophisticated military capabilities. Thus, the easing of Cold War tensions, does not create a benign environment nor equate to the emergence of a tranquil world. As Saddam Hussein so recently proved, the future will likely witness regional crises brewing up quickly in unpredictable locations throughout the world. While not all such crises will threaten vital U.S. interests, some --like the Iraqi invasion of Kuwait -- certainly will.

In future situations, U.S. forces may be required to rapidly and globally respond to meet any challenge that threatens our national interests. JCS Pub 0-1 defines this "capability to deploy

and sustain a military force worldwide in support of national strategy as - 'STRATEGIC MOBILITY.'"¹

A comprehensive view of our emerging environment, clearly indicates that the United States' strategic mobility capability, will be critically important in providing a conventional deterrence, and underwriting our national security strategy, now and in the future. This concept is underscored in our newest National Security Strategy when it states that:

In this new era, the ability to project our power will underpin our strategy more than ever. We must be able to deploy substantial forces and sustain them in parts of the world where prepositioning of equipment will not always be feasible, where adequate bases may not be available and where there is a less developed industrial base and infrastructure to support our forces once they have arrived....we must sustain and expand our investment in airlift, sealift and prepositioning.²

Additionally, a recent USAF White Paper entitled "Global Reach -- Global Power," highlights the fact that: "strategic mobility lies at the heart of a credible deterrent posture in this new environment" and notes even further that "without this capability to project forces, there is no conventional deterrent."³

To provide this mobility for U.S. forces, our nation has historically relied on a balance of the complementary capabilities of what has been called the "mobility triad" - airlift, sealift, and prepositioning. The focus of this research paper will be to examine our current mobility triad and investigate if the United States is prepared to rapidly project and sustain a balanced military force on a global scale in support of our national security objectives.

SECTION I

INTRODUCTION

What was in times past a relatively simple, purely military concern, has today become an issue that transcends the interests of the Armed Forces, and even to an extent those of the Department of Defense. Strategic mobility is so constituted today as to encompass a broad spectrum of interests that ranges from the private sector to several departments of the United States Government.⁴

General Wallace H. Nutting
Former Commander in Chief,
U.S. Readiness Command

The American people have been committed to a strong defense and past Administrations and Congress have undertaken positive action to strengthen the United States military forces. Force structure improvements during the late 1980's maintained our strategic and theater nuclear forces at levels required to insure deterrence. Additionally, the services procured and fielded modern conventional equipment, to replace equipment developed prior to Vietnam. We spent funds on such things as: force modernization, training, repair parts, ammunition and recruiting quality personnel. In short, we took long overdue steps to ensure that we had sufficient high tech firepower to defend our interests.

"The keystone of our strength remains the commitment of the American people."⁵ However, recent world events, including the end of the Cold War and breakup of the Soviet Union, have signaled the possibility of East-West force reductions and increases in warning times for any "surprise attack." The vision of a "New World Order" has resulted in reductions to American defense funding, and

initiatives to significantly drawdown forward positioned U.S. military equipment and forces.

The concept of deterrence will remain as the foundation of our military strategy. However, the retrenchment of our arsenal dictates a realignment of our forces, resulting in the return of American forces to the Continental United States (CONUS). These forces and firepower will do little good, if we are unable to move them to a future contingency location in a timely manner.

The ability of the United States to deter aggression, limit conflict, or wage war successfully, depends on our country's ability to rapidly deploy and sustain fighting units. A combat unit, however well trained and equipped, cannot and will not influence the outcome of a conflict, much less preclude it, unless its firepower is available within the battle area in the most timely manner. This premise is clearly supported in our National Security Strategy: "Our strategy demands we be able to move men and material to the scene of a crisis at a pace and in numbers sufficient to field an overwhelming force."⁶

The role of strategic mobility in any scenario leading up to and including war-fighting is becoming more critical as we move into the multipolar world of the 1990's. As Robert H. Foglesong indicates in his essay, US Military Strategy: Forward and Mobile, "A less-deployed force structure in the next decade leads directly to a reduced presence and a reduced influence. To accommodate this apparent dilemma, the capability to move combat forces rapidly to those spots in the world where US interests are threatened takes on

new importance."⁷

To achieve our national security goals, the Department of Defense is developing a strategy based on a mix of CONUS based "contingency or core reinforcement forces" and "limited" forward deployed theater forces. Together this minimum level of forces will be known as the "Base Force." As General Colin Powell, JCS Chairman, stated: "inherent in the employment of this strategy, is the ability to immediately project and sustain these forces in any region of the world."

When confronted with this requirement to defend strategic locations worldwide, a balanced mobility program becomes essential. This balanced mobility program is the triad which consists of airlift, sealift, and prepositioned equipment and supplies.

These elements of airlift, sealift and prepositioning are complimentary, synergistic, and interdependent and each one is critical to our national security. Collectively, they provide the United States military the potential to respond to any provocation around the world. And as Secretary of Defense, James Forrestal cautioned in 1948, "It is our duty to see that our military potential conforms to the requirements of our national policy; in other words, that our policy does not outstrip our power."⁸ Shockingly, this is exactly what has happened to our mobility system today.

This research report will first analyze the causes and magnitude of the United States strategic mobility problem. Sections IV, V, and VI will then focus on the individual components

of the strategic mobility triad -- airlift, sealift and prepositioning -- and assess the severity of limitations placed on United States force projection. Section VII will present a statement of conclusions concerning the impact of strategic mobility shortfalls on conventional deterrent capabilities and ultimately on our national security. It will also offer some possible solutions for improving this mobility system.

SECTION II

CAUSES OF THE PROBLEM

There are a number of reasons why strategic mobility is both a concern and a problem for the United States. The United States is committed to a strategy of deterrence. This requires an ability to react to any aggression and precludes designing a force, and planning lift, for one specific conflict. As Michael Rich of RAND Corporation pointed out: "At the height of Desert Storm, 35 conflicts were raging around the world."⁹ As a result of this type of turmoil, our forces must be flexible. A global force sizing scenario dictates that we must be prepared to fight a war anywhere in the world while still honoring our commitment to our alliances. Soviet adventurism and subversion in Afghanistan, Nicaragua and Grenada demonstrate to a limited extent just a few of the past localities. We only have to look at more recent developments in locations such as Beirut, Panama, Liberia or Kuwait to discover the full range of our commitment.

With the drawdown of our forward deployed theater forces, most of our combat capability will have to deploy long distances and over oceans to get to the war. As General Colin Powell, Chairman of the JCS, pointed out: "The next conflict ain't going to be in the U.S. and we need to be prepared to project power by air and sea -- anywhere." In order to get there we need airlift and sealift, or we need to forward deploy sufficient forces around the world. The second alternative is no longer politically, economically, socially or militarily possible. Therefore, responsive lift is

required.

Modernization of our forces in the 1980's had a negative impact on strategic mobility. The requirement for modern tactical weapon systems to meet the "Soviet threat" took a large part of the Defense budget. This left relatively few dollars to modernize our critically deficient sealift force. "OSD estimates show that only five percent of the 1984, 1985 and 1986 DOD budgets were invested in sealift or prepositioning."¹⁰ Modernization efforts of the 1980's not only cut into lift improvement resources, they exacerbated the strategic mobility problem by providing both more and heavier weapons to be lifted. The modernization programs have also significantly increased fuel and ammunition support requirements which impact on the amount of lift necessary to sustain the force.

In the past strategic mobility was also considered somewhat of a stepchild within the Department of Defense. Responsibility for providing lift rests with the Air Force and the Navy. Yet, the forces that need to be lifted are predominantly Army and Marines. The Air Force and Navy saw a more imperative need to spend resources on weapon systems other than lift. This divergence of proponency magnified the problem of advocating increased funding for something as "drab" as strategic mobility compared to the "flash" of aircraft carriers or fighter aircraft.¹¹ As a result, what should have been a high priority requirement was relegated to the list of things that would have been done if we had "a few more dollars."

A final mobility concern is the National Transportation Policy of the United States. It expresses that we will rely on the private sector to meet the nation's requirements for transportation, and the government will intercede only when the private sector can't meet these needs. For this reason we don't have nationalized railroads, airlines, or steamship lines like most of the other countries of the world. Because of the necessity to operate at a profit, the transportation industry of the United States is neither designed nor sized to support the Defense mission. As competition (both foreign and domestic) forced reductions and consolidations in ocean shipping and intercontinental air routes and even rail service, the Department of Defense was slow to recognize the growing gap between commercial transport capability and national security requirements. And, the strategic mobility problem became worse despite improvements of faster, larger, more efficient transportation equipment.

SECTION III

MAGNITUDE OF THE PROBLEM

Strategic mobility to its fullest extent, including such factors as the required infrastructure, is a monumental challenge. It begins with readiness at CONUS military facilities and does not end until the troops and equipment are in their deployed combat positions. It requires a comprehensive integrated network with infinite possibilities for complications.

When military planners speak of strategic mobility the term conjures up a mind-numbing series of intricate details that need attention before a military force can move from Point A to Point B. The process is further complicated by the fact that we have hundreds of "Point A's" ('military bases, depots, commercial airports, rail stations, and harbors') and even a larger number of "Point B's" ('fixed and unimproved') in forward theaters of operations.....military planners require the aid of computers in order to manage all of this information together in a logical chain of events. Anyone wishing to understand the network that makes up strategic mobility could easily be lost in a forest of "if, then" decision trees. Every plan has innumerable variations that differ in size of forces, type of equipment, source of supply and routes to various destinations.¹²

Lieutenant Commander Kenneth D. Appleton
U.S. Coast Guard

This paper will concentrate on examining the limitations of the "Intertheater Links" rather than the entire "Chain of Events Network." Yet, all the links together determine the overall impact of improvements or degradations in the various parts of the strategic mobility equation.

SECTION IV

AIRLIFT

Airlift provides U.S. policy with credible military muscle - it has been called 'the backbone of deterrence.' The presence of our airlift fleet deters adversaries because they know that U.S. forces can be deployed rapidly to deal with threats to U.S. security interests and those of our allies. With sufficient airlift, U.S. forces based in the CONUS can deter aggression in widely-spaced areas around the world - areas far too numerous to cover with forward based forces. And should deterrence fail, airlift enables our forces to be deployed and employed flexibly and efficiently.¹³

Airlift and National Security
Secretary of the Air Force 1991

When rapid reinforcement and timely arrival of supplies are absolutely necessary, there is no substitute for readily available airlift support.¹⁴

Gen Carl Stiner
Commander in Chief,
U.S Special Operations Command

"Airlift is the single element of our national mobility force structure which gives this country the capability to reinforce distant theaters with combat powers in the early days of a crisis."¹⁵ These are the words of General Thomas M. Ryan, former Commander in Chief of the Military Airlift Command. These words were reinforced in a Department of the Air Force report on "The USAF in the Gulf War", which states: "Airlift in the Gulf War was critical to allied success. None of the other accomplishments of the air campaign, no matter how impressive, would have been successful without timely and effective airlift."¹⁶ The importance of airlift has also been reinforced by other senior officers: Lt Gen Edwin Leland, Director, J-5 Joint Staff, stresses the

importance of strategic lift and its critical impact on the way forces are organized and equipped. General Carl W. Stiner, first Chief of Staff, Rapid Deployment Joint Task Force (RDJTF), Commander, Joint Task Force, Operation JUST CAUSE, former Commander 82nd Airborne Division and XVIII Airborne Corps and present Commander in Chief, US Special Operations Command told the House Armed Services Committee,

Strategic Airlift is crucial to project our forces worldwide. This has been demonstrated again by Operation Desert Shield/Storm. The United States does not have enough Strategic Airlift. This will become more apparent as forward deployed force levels are reduced. The heart of our conventional deterrence and response capability will rest with CONUS-based forces. For our forces to be credible, a robust airlift capability is essential.¹⁷

Although no nation in the world can match the United States' ability to move things and people by air, this capability is simply not enough. Studies are universal in this opinion. A 1981 Congressionally Mandated Mobility Study set a fiscally constrained airlift requirement of 66 Million Ton Miles per Day (MTM/D). Today's strategic airlift fleet, fully mobilized, accounts for approximately 48 MTM/D. General William C. Moore summed it up when he said, "Our organic resources and Civil Reserve Air Fleet (CRAF) produce a lot of airlift capability. But, continuing studies show that even with all our military transports and the CRAF, we still don't have enough cargo capability to meet a war in Europe."¹⁸ Obviously, a contingency in another part of the world, at the same time as a European war, would severely exacerbate the problem.

It is apparent that the strategic airlift capability of the United States directly affects the formulation of national strategy

by acting as a limiting factor in the use of the military element of national power in a power projection scenario. Because of the finite nature of United States airlift capability, strategists have been limited in the size of forces which they could deploy worldwide in response to contingencies. They have been additionally handicapped by the excessive length of time required to position those forces by other means. Studies indicate that just to fly the 82nd Airborne Division to the Middle East would tie up nearly all United States military cargo aircraft for approximately two weeks.¹⁹ To move the equipment and personnel of a single Army division would take 400 C-5 sorties and 1200 C-141 sorties -- five times as many flights as there are planes.²⁰ As a result of heavier Army divisions, the airlift situation became even worse.

The United States Air Force is desperately short of out-sized lift to support the Army increases in size, weight, and numbers of heavy mechanized firepower items such as the M1 Tank, Bradley Fighting Vehicle, 155MM self-propelled howitzer, and Air Defense artillery pieces like the Patriot missile system. The programmed acquisition of 120 C-17's will help in the future. However, the only out-sized capability we now have is the C-5. These 108 C-5's cannot satisfy our current out-sized cargo requirements, much less the growing out-sized requirements of our forces as they return from theater beddown locations to the CONUS. We also need to be aware of our lack of out-sized capability as we field new systems. During a period from 1982 to 1987, the out-sized requirements of an

Army mechanized division grew by 60 percent."²¹

As seen, the airlift requirements to support Army forces are large. Additionally, much of the initial airlift deployment and a portion of the follow-on flights are used to provide support equipment for airlift operations. Similarly, the airlift support requirements to sustain airlift employment are also large and cannot be discounted. For example, when the USAF flew tanks and other equipment into Israel during the 1973 Yom Kippur War, their refueling requirement forced them to take a ton of fuel out of Israel's reserves for every ton of cargo they delivered.²²

Complicating current airlift shortfalls are the effects of attrition. Even assuming air superiority, one-third of our aircraft may be lost during the first 180 days of combat.²³ Transport aircraft are the most susceptible to attack because they operate with no self-protective offensive or defensive equipment.

Finally, there is one last factor that limits the capability of airlift. As presently structured, our strategic airlift system is extremely vulnerable. Current strategic airlift aircraft, both CRAF and organic, are tied to a limited number of airfields throughout the world that have the capacity to accommodate them in terms of facilities, runway width and length, and ramp parking space. The capable airfields are well known to our adversaries. They know that we will have to concentrate our resupply and reinforcement efforts at these locations. By attacking these choke points, they will have an excellent opportunity to severely limit the effectiveness of the entire strategic airlift system.

SECTION V

SEALIFT

The United States' national sealift objective is to ensure that sufficient military and civil maritime resources will be available to meet defense deployment, and essential economic requirements in support of our national security strategy. The broad purpose of the sealift policy is to ensure that the U.S. maintains the capability to meet sealift requirements in the event of crisis or war.

National Security Sealift Policy
National Security Council, 5 Oct 1989

While airlift is fast and flexible and is certainly a necessary strategic mobility asset, sealift is by far the most cost-effective. Sealift is vital to the deployment of heavy armored forces and the bulk of sustaining supplies. "Over 90 percent of the equipment and sustaining supplies used in South East Asia and more recently 95 percent in the Kuwait Theater of Operations, were transported by sea."²⁴

It is estimated that one dry cargo ship can deliver the equivalent tonnage of two and one-half days of airlift. When the first 10 ships arrive in a distant location like the Persian Gulf, they will deliver tonnage approximately equal to a full month of airlift.²⁵ During the 1973 Yom Kippur War, the first cargo ship that arrived in Israel carried more supplies than the entire United States airlift effort. But, as the air advocates are quick to point out -- the war was over by the time the first ship arrived. Thus, it is obvious that we cannot totally rely on one mode, we need both sufficient airlift and sealift to deploy and sustain our

forces.

Today's strategic planners from all services are looking at a shrinking United States merchant fleet which is approximately 5 percent of its post-WWII size. It is also more specialized and less adaptable for movement of military cargo. Admiral William Crowe, former Chairman of the Joint Chiefs of Staff, expressed his viewpoint to Congress in April 1989 when he said: "the capacity of our merchant marine ... is dismal. It is a disaster... a national problem."²⁶ Similarly, Rear Admiral Bruce Keener, a former Commander of the Military Sealift Command (MSC), stated that "The present United States flagged strategic sealift fleet is not capable of supporting a 'one and one-half war' contingency, or even a major 'one war' requirement in its present condition."²⁷ Admiral Francis Donovan, current Commander of MSC, commented that the U.S. merchant marine is deficient by 25 roll-on, roll-off cargo vessels. He indicated that these ships would become vitally important if the United States were to forgo reliance of foreign vessels in emergencies like Operation Desert Storm.²⁸ In fact, our fleet is now smaller than the 700 merchant vessels we lost in World War II. Chronic underfunding has resulted in years of deferred action. In spite of our fleet's condition, "Congress lopped off nearly two-thirds of the Maritime Administration's \$239 million budget request in 1990."²⁹ It is apparent that sealift may be in equally bad or worse shape than the airlift portion of the strategic mobility force.

Similar to airlift, sealift also imposes limitations on

strategists concerned with force projection in support of national security objectives. With an ideal mix of ships, it would take three thousand ship arrivals in European ports each month to keep NATO in a European war. If faced with a mixed bag of ships of mismatched types and capabilities, monthly requirements could double.³⁰ Today, there are available from all sources (including a NATO pool), 1000 to 2000 ships of various types and capability. Assuming all were made available on-time and with no attrition it would require from 2.5 to six crossings per month by each ship to support a major European war. Optimistically, considering loading and unloading times, two crossings a month is about all that one could count on. Therefore, considering all sealift assets, we are probably only able to meet optimistically 80 percent of sealift requirements and pessimistically 33 percent of our NATO sealift requirements. These figures of course would be further reduced in the event of another smaller contingency simultaneously occurring with a major European war. Sealift must also consider attrition. A cargo ship's vulnerability far exceeds that of an aircraft, not to mention the ports, harbors and sea approaches. Attrition of early convoys may reach 40 percent.³¹ This not only reduces the size of the fleet; but, the necessity to convoy slows turn-around times.

During Vietnam, despite the low vulnerability, foreign crews frequently walked off ships when they were told Vietnam was their next destination. Certainly, many of the foreign crews on the "flag of convenience" vessels may do the same in any other

conflict. In addition to this potential crew problem, the Maritime Administration (MARAD) plans on United States crews manning the National Defense Reserve Fleet (NDRF) vessels when they are activated from storage. These crews have not been predetermined (they could come from non-working mariners) and this would slow activation at best and at worst, limit the number of ships that can be crewed.

The reserve fleet itself is old and outmoded. Most of the ships (81 of 96), use steam propulsion rather than diesel engines. Finding spare parts and experienced engineers is a significant challenge.³² During a REFORGER exercise, one of the newer ready-reserve ships was to be activated to test movement techniques. The ship experienced mechanical problems and could not participate in the Europe-bound deployment.³³ Thus, it is evident that the United States is probably banking too heavily on these vessels.

The last factor limiting sealift is the requirement for special port facilities for many of the vessels in the sealift fleet. These facilities such as container cranes, long and deep berths and specialized material handling equipment are seen as "the one common denominator, one choke point detailed in every sealift plan."³⁴ They not only limit the amount and type of cargo to be delivered but in some parts of the world, they don't even exist. Thus, it is readily apparent that our national sealift capability is also a limitation in our national security strategy.

SECTION VI

PREPOSITIONING

The third and final leg of the Strategic Mobility Triad includes alternatives to intertheater lift such as: forward deployment of military forces and prepositioning of military mobility assets. In addition to United States forces stationed throughout the world, each branch of the Department of Defense has initiated some type of program to "forward deploy" war readiness materials, either at fixed installations or at sea, to preclude intertheater shipment. As stated by the late USAF Vice Chief of Staff, General Jerome F. O'Malley, "Every ton we preposition is one less ton we must fly or ship in time of crisis."³⁵

Prepositioning is the most effective deterrent of all of the strategic mobility programs. As the Secretary of Defense's Report to Congress states:

Forward deployed forces play a critical role in deterring aggression, preserving regional stability and protecting U.S. interests. They are visible evidence of U.S. commitment and provide our initial capability for crisis response and escalation control.³⁶

There is no doubt about our ability to deploy and employ these forces since they are already in the forward areas. However, the question remains: Are they in the right areas? This will be one of the critical issues as we reduce our forward presence in overseas theaters. In solving these issues, it will be important to keep in mind a United States Army Strategic Institute study, which pointed out, "Deterrence and war-fighting capability are maximized when

units are forward deployed whereas the utility of strategic mobility in these strategies is dependent on real capabilities and the enemy's perception of these capabilities."³⁷

This concept of using forward deployment and prepositioning, represents not only limitations to force mobility but it can also produce some measure of international instability. For example, some governments have traditionally viewed forward deployment as a challenge of provocation to which they should respond.

The United States is constrained from using prepositioning of material configured to unit sets (POMCUS) assets for scenarios outside of Europe, because this equipment is dedicated to NATO contingencies. As pointed out in a Government Accounting Office (GAO) study, "The United States may not be able to withdraw the equipment through a unilateral decision because it would probably require approval, agreement, or consultation with NATO allies."³⁸

Because the storage sites of this equipment and supplies are located in a potential area of conflict, its flexibility for use in another contingency region may be significantly decreased. While its vulnerability to enemy actions is increased. Relatively undefended caches of massive amounts of vital prepositioned military equipment offer an inviting target to potential aggressors. As a 1979 GAO report states:

The extremely critical nature of prepositioned material to the success of the reinforcement of conventional forces, as now planned by the Joint Chiefs of Staff, suggests that it would be a high priority target for an enemy. At present, however little in the way of an active defense capability exists or is planned to protect the equipment storage sites from: (1) air attack, (2) airborne assault, (3) chemical attack, and

(4) sabotage. Thus, it is possible that the use of this equipment could be denied to United States forces after arrival in theater.³⁹

Finally, the prepositioning of equipment is expensive, since we must procure an identical set of equipment for the forces to train with or to use in contingencies in other areas. There are also significant costs associated with the maintenance of storage facilities and ships in which equipment is stored. For example, the lease of the ships in near term positioning is costing this country over ninety million dollars per year and the POMCUS program runs approximately 4.2 billion dollars over a 15 year period. In all our mobility programs, we seem to have the money for the temporary fixes, but not for the permanent cure.

SECTION VII

CONCLUSIONS

Probably the most common limiting factor in logistics has been transportation. Whenever shortages of supplies or equipment have appeared at the battle fronts, from the Revolutionary War to the Korean War,...it has been the result of some shortage in transportation somewhere along the line.

John Huston
The Sinews of War

There must be a linkage between the strategic mobility capability and the requirements inherent in national security objectives. Ideally, mobility should be sized to meet the combat strategy. If this is not possible, then the contingency plans should be altered to allow for the strategic mobility shortfall. All plans involve risk and there seems to be a tendency to accept a strategic mobility shortfall as a planning risk while continuing to plan for the use of forces that simply cannot be deployed on time and/or sustained once in place. Research of the current unclassified strategic mobility literature is almost unanimous in its findings on the capabilities to support military strategy and ultimately our national security objectives:

- Sufficient lift assets are marginally available for initial force deployments.
- Probable attrition of air and sea assets will turn a difficult situation into the impossible.
- Sustaining the force will be extremely difficult especially in the mid-range of a protracted war.

- Dependence on the availability of fixed ports (both air and sea) is a potential weakness.

The capability to support a contingency operation is dependent on the location and the time available for deployment and force build-up:

- Distances involved in most contingency scenarios are extremely long and would severely tax lift assets.
- Lack of prepositioned equipment requires a large number of airlift sorties.
- Sustaining any force until the first ships arrive (30 to 90 days) uses almost all of the airlift.
- Military-owned strategic mobility assets are not sufficient to support anything but an extremely small (one division) force and therefore, early "call-up" of commercial assets would be mandatory.

SECTION VIII

POSSIBLE SOLUTIONS

Strategic mobility is not a military problem, it's a national problem! Cooperation between this nation's civil and military transportation community must be expanded to solve this problem. Restricted budgets, inflation, and limited national resources, all emphasize the need for a unified effort to provide our nation with a strategic mobility system capable of meeting the growing commercial markets and our defense commitments around the world. As General Duane Cassidy, former Commander in Chief of U.S. Transportation Command, emphasized: "The capability of our military forces is directly dependent on our ability to move them rapidly and efficiently.....there is no U.S. defense transportation system without a robust civilian transportation system."⁴⁰

A national transportation system should be established to coordinate use of railroads, pipelines, international shipping and airlines. Numerous obstacles to this concept exist that require federal actions. The first action of providing a cabinet level position has been developed. Legal problems concerning anti-trust, government/civil cooperation, cost-sharing, taxes and incentives, require congressional action. The pressures of time, evolving world conditions, and scarce resources demand concentrated effort now to develop a coordinated transportation system.

When the commitment to a coordinated national transportation system is made, each element -- land, sea, and air -- will have a

defined role, and each will work to meet national objectives as defined by national needs. Once the roles are defined, a plan must be developed for the most economical solution.

The first step for airlift should be a review of President Reagan's 1987 National Airlift Policy, and the 1989 Senate Appropriations Committee Report, which directed military leaders to work together with civilian airlines to create an effective airlift system.⁴¹ "Airlift must be viewed as a national resource. Some of the resource is in the civil sector and some of it is represented by organic military aircraft. The nation must plan on the efficient use of both sectors."⁴² "The goal of the United States government is to maintain in peacetime, organic airlift resources, manned, equipped, trained and operated to ensure the capability to meet approved requirements for military airlift in wartime, contingencies and emergencies."⁴³

The next step would be to initiate a joint civil/military program for the development of the next generation of cargo aircraft beyond the C-17. As noted in a Department of the Air Force report on the Gulf War: "America's tired airlift forces, rooted in the technologies of the 1950's and 1960's, are aging and badly in need of upgrading."⁴⁴ A cooperative civil/military venture could take advantage of the economies of scale providing reduced cost, interoperability and commonality of systems, support equipment, and spare parts. It could expand to joint tenancy at airfields including shared cargo-handling facilities. As a significant side benefit, commonality in aircraft would promote

standby expansion capability by providing an interchangeable work force between the civil and military sectors. The potential exists to make a quantum increase in national strategic airlift mobility.

The potential for expansion through civil/military interaction also applies to sealift. The best solution to our long-term sealift shortfalls is an open partnership between the Navy's Military Sealift Command and the commercial shipping industry with congressional support to develop a program that will encourage the civilian sector to either build militarily useful ships or to incorporate military utility in the design of commercial ships. As General Colin Powell continuously points out: "we are anxious to purchase Ro/Ro ships off the open market as well as designing one of our own, and we need a good mix of both." He also emphasizes that: "we need to examine creative ways to buy and lease back this shipping capability."

One of the most critical goals this nation should have is to have a strong merchant marine. "The decline of the U.S. merchant marine has impaired the Nation's ability to meet military sealift requirements."⁴⁵ "MARAD has predicted that the U.S. merchant marine fleet will continue to decline from 168 military useful dry cargo ships today to 35 by the year 2000."⁴⁶ Building a strong merchant marine requires a national commitment and sizeable investment in resources - but it must be done. As Representative Walter B. Jones, Chairman of the House Merchant Marine and Fisheries Committee emphasized: "We cannot afford to have the U.S. merchant marine as the weakest link in our armor of defense."⁴⁷ In

order to accomplish this, the United States should:

- establish a time-phased plan to develop and maintain a merchant marine sized to our power projection requirements
- require a percentage of trade into and out of the country to be carried by United States flag ships (most other countries of the world do this - we don't),
- change Coast Guard rules on crews and registration to make United States ships more efficient
- subsidize operations of U.S. steamship companies to make them more competitive with vessels from other nations
- accept international ship design standards for U.S. ships
- change the law requiring U.S. flagged ships be built in U.S. shipyards
- provide tax incentives for U.S. flag carriers to encourage capital investment

A revived national transportation policy will help focus attention on the importance of transportation and mobility resources not only to military strategy, but to the health and economy of the nation as a whole. The resulting renewed emphasis by civilian and military leaders at all levels will add additional strength to our efforts to promote and enhance the strategic mobility contribution to our national security objectives. Together with this improvement will come recognition of our will and capacity to project power and sustain force anywhere in the world. It should prove to be a strong deterrent to anyone considering aggressive action.

SUMMARY

As the Persian Gulf War clearly attests, it is absolutely imperative that we establish and maintain a comprehensive, viable, flexible and integrated transportation system and infrastructure to undergird our national security strategy. Indeed, we must be able to get the right mix of U.S. and allied military forces to the right place at the right time to protect our national interests.⁴⁸

Emphasis on strategic mobility is not only still needed, but that emphasis has become more important with the rapidly changing world situation. As the threat changes, many of the factors previously used for planning and determining our state of readiness becomes less reliable. As potential adversaries change size, location, and capabilities, so must our ability to deploy, employ and sustain forces. Many of these uncertainties and instabilities require an even stronger strategic mobility triad.

There is overwhelming evidence that the strategic mobility capability of the United States is not sufficient to meet national security objectives. We must either relook at the requirements or develop the necessary strategic mobility capability. This promises to be a long and costly task; but, if we are going to get our forces where they are needed, on-time, and support them once they are there, we need to make improved strategic mobility a high-priority national objective.

Within the Department of Defense the initiatives of power projection and mobility have finally begun to take on a new life. The FY 1992-93 Defense Budget request formulated an imperative for the U.S. to be able to project its forces rapidly, around the

globe, to safeguard vital U.S. interests.⁴⁹ On 24 January 1992, The Department of Defense provided the long awaited Mobility Requirements Study (MRS) to the Congress. The MRS calls for the construction or conversion of twenty large, medium-speed roll-on/roll-off ships. In addition, the MRS calls for the lease of two containerships for the prepositioning mission. It also reaffirmed the growth of the Ready Reserve Force from the present ninety-six ships to one hundred forty-two ships. A final MRS recommendation was to continue the C-17 program to improve the airlift component of strategic mobility. The Department of Defense intends to request that Congress enact language enabling the establishment of a "Sealift Fund" in the Fiscal Year 1992 Defense Bill. This fund will provide the resources to construct, convert and purchase ships for the Department's sealift mission.⁵⁰ Thus, we have initiated measures to solve our strategic mobility shortfall and it is critical that we succeed in this national endeavor.

The Challenge that we face as a nation in meeting our global mobility needs is to take advantage of the attributes of each leg of the mobility triad in the most cost-effective manner possible. Given the magnitude of overseas force withdrawals under consideration, (in several areas, not just Europe), the legs of the mobility triad have each increased in importance. They will remain complementary and synergistic and we must capitalize on the unique attributes of each as appropriate to meet the realities of the future security environment.⁵¹

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